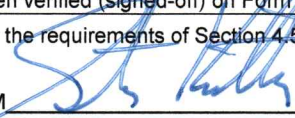


## DOCUMENT CONTROL PROCESSING FORM

|   |                                    |                          |                          |
|---|------------------------------------|--------------------------|--------------------------|
| File Number:                                      | DESN0770<br>Item No. 01            |                          |                          |
| Document Date:                                    | 05/19/20                           |                          |                          |
| Document Type:                                    | Forms: DQA Form, RCSR form         |                          |                          |
| DCPF Author:                                      | Kevin W.                           |                          |                          |
| Subject:  | Final: Drainage Maintenance Manual |                          |                          |
| To<br>(Company):                                  | WSDOT                              | To<br>(Individual):      | PARSHOTAM AJUDIA         |
| From<br>(Company):                                | Jacobs                             | From<br>(Individual):    | Eric Crowe               |
| Additional Subject Information<br>and/or Keywords |                                    | Schedule<br>Activity:    | N/A                      |
|   |                                    |                          |                          |
|   |                                    |                          |                          |
|   |                                    |                          |                          |
|   |                                    |                          |                          |
|   |                                    |                          |                          |
|   |                                    | Yes                      | No                       |
| Distribution:                                     | Attachments                        | <input type="checkbox"/> | <input type="checkbox"/> |
| Drainage Distribution                             | Notes:                             |                          |                          |
|   |                                    |                          |                          |
|   |                                    |                          |                          |
|   |                                    |                          |                          |

# Design Quality Audit Checklist

|   |  |                                     |                          |
|---|--|-------------------------------------|--------------------------|
| <b>DESIGN PACKAGE/SUBMITTAL NAME:</b> Final Drainage Maintenance Manual   |  |                                     |                          |
| <b>DISCIPLINE:</b> Drainage   |  | <b>AUDIT DATE(S):</b><br>05/19/2020 |                          |
| <b>AUDIT ITEM(S):</b> Final Drainage Maintenance Manual; Manual check Print;RCSR Form   |  | <b>CONFORMS</b>                     |                          |
| <b>AUDITOR:</b> <u>Steve Kitterman</u>  |  | <b>YES</b>                          | <b>NO</b>                |
|   |  | <b>N/A</b>                          |                          |
| 1. Calculations:  |  |                                     |                          |
| a) Have both original documents and check prints been provided for audit?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Are procedures for marking-up check prints being followed (R-Y-G)?<br>(Red/Yellow – Checker, Green – Backchecker/Checker, Yellow – Verifier)   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| c) Are the check prints appropriately signed-off and dated?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| d) Have Checker comments been incorporated/addressed/resolved?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| e) Did the checker sign-off and date the original documents?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| 2. Computer Calculations:   |  |                                     |                          |
| a) Have computer programs been approved/ verified?<br>– Programs Used:  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Has computer input been checked?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| c) For non-verified spreadsheets, has input and output been checked?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| d) Are the check prints appropriately signed-off and dated?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| e) Have Checker comments been incorporated/addressed/resolved?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| 3. Drawings/Plan Sheets:  |  |                                     |                          |
| a) Have Inter-Discipline Design Check (IDC) reviews been performed?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| – Have Reviewer comments been incorporated or addressed?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| – Did each Reviewer sign-off and date the review print?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Have both original documents and check prints been provided for audit?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| c) Are procedures for marking-up check prints being followed (R-Y-G)?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| d) Are the check prints appropriately signed-off and dated?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| e) Have Checker comments been incorporated/addressed/resolved?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| f) Has the WSDOT spreadsheet for CADD conformance (symbolology, naming) been provided?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| 4. Specifications:  |  |                                     |                          |
| a) Have both original documents and check prints been provided for audit?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Are procedures for marking-up check prints being followed (R-Y-G)?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| c) Are the check prints appropriately signed-off and dated?   |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| d) Have Checker comments been incorporated/addressed/resolved?  |  | <input type="checkbox"/>            | <input type="checkbox"/> |
| 5. Other Design Documents (Reports, Deviations, etc):   |  |                                     |                          |
| a) Have both original documents and check prints been provided for audit?   |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Are procedures for marking-up check prints being followed (R-Y-G)?   |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Are the check prints appropriately signed-off and dated?   |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have Checker comments been incorporated/addressed/resolved?  |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Reviews:   |  |                                     |                          |
| Were scheduled design reviews completed?  |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| – Do review comments have an agreed upon action code?   |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| – Are the review comments incorporated/addressed/resolved?  |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| – Have corrections been verified (signed-off) on Form RCSR?   |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. The signature below certifies the requirements of Section 4.5 (Design QA Audits and Certification) of the QMP have been fulfilled.   |  |                                     |                          |
| DQAM   |  | Date <u>5/19/2020</u>               |                          |
| 8. This Section to be Completed for RFC Packages Only. The signature below certifies that the documents included in this submittal are in compliance with the requirements to be Released For Construction. |  |                                     |                          |
| DQAM _____  |  | Date _____                          |                          |
| Comments/Notes:   |  |                                     |                          |

**I-405 / SR 167 Interchange Direct Connector Design Build Project  
Review Comment Summary and Resolution Form**

| <b>Package Description: DESN0762 Preliminary Drainage Maintenance Manual</b>   |     |                |  |                       |  | <b>Submittal Date:</b><br>2/12/2020   |                      |                           |
|--|-----|----------------|--|-----------------------|--|---------------------------------------|----------------------|---------------------------|
| <b>Reviewer: Alan Black/WSDOT GEC/Hydraulics (ADB)</b><br>(Name/Title/Organization)  |     |                |  |                       |  | <b>Comment Due Date:</b><br>2/26/2020 |                      |                           |
| Comment  |     | Sheet No.<br>* | Review Comment   | Initial<br>Code<br>** | Response   | Response<br>By                        | Final<br>Code<br>*** | Correction<br>Verified by |
| No.  | By  |                |  |                       |  |                                       |                      |                           |
| Code: A=Accept Comment; B=Review and Discuss Comment; C=Evaluated but Not Incorporated; D=Comment Beyond Scope or Beyond Design Phase                      |     |                |  |                       |  |                                       |                      |                           |
| Note: * Indicates Sheet No., Page No. and Line No. or "G" for General Comment; ** Filled out by Design; *** Agreed Resolution (code "B" is not acceptable) |     |                |  |                       |  |                                       |                      |                           |
| 1  | ADB | Gen            | The submittal did not include the individual BMP maintenance owners manual sheets as required by RFP 2.14.6.9: "The Design-Builder shall format the documentation of each BMP installation in accordance with the Sample Information Sheets for the Stormwater BMP Maintenance Owner's Manual (Appendix H)." See the attached "BMPMaintenanceSample_I405_Renton Stage1_Complete_MP_1.9_Pond_S1.1.pdf" for the site that was modified by this project, and therefore needs to be updated to include the CABS.<br><br>This review assumed that those BMP Maintenance Owner's Manuals will be submitted as a separate review package, so comments herein only address the portion of the Maintenance Manual that was submitted. | A                     | Individual BMP maintenance owners manual sheets have been included.  | TPH                                   | A                    | JDZ                       |
| 2  | ADB | Gen            | Check table heading to avoid word wrapping issues (i.e. Table 3.1.2.1 and 3.1.2.2 have the last letter of some words showing up on the next line.  | A                     | Table headings have been corrected.  | TPH                                   | A                    | JDZ                       |
| 3  | ADB | Gen            | Resolve whether the CABS treatment will be reconstructed per design or replaced by BMPs that are constructible for this contractor.  | A                     | CABS will be reconstructed before the project is closed out. Atkinson is working with WSDOT inspectors to address the failed CABS. | TPH                                   | A                    | JDZ                       |
| 4  | ADB | Gen            | The maintenance manual should refer to the special considerations , inspection, and maintenance associated with the FAA Wildlife Hazard Management guidelines that focus on addressing wildlife use, standing water, specific seed mix (omitting clover), etc. Please review the WSDOT Aviation Stormwater Design Manual for maintenance requirements near airports.   | A                     | Section 3.5 has been added to reference the FAA & WSDOT 2008 Aviation Stormwater Design Manual.                                    | TPH                                   | A                    | JDZ                       |

**I-405 / SR 167 Interchange Direct Connector Design Build Project  
Review Comment Summary and Resolution Form**

| <b>Package Description: DESN0762 Preliminary Drainage Maintenance Manual</b>         |           |                        |  |                                |  | <b>Submittal Date:<br/>2/12/2020</b>   |                               |                                   |
|--|-----------|------------------------|--|--------------------------------|--|--|-------------------------------|-----------------------------------|
| <b>Reviewer: Alan Black/WSDOT GEC/Hydraulics (ADB)<br/>(Name/Title/Organization)</b> |           |                        |  |                                |  | <b>Comment Due Date:<br/>2/26/2020</b> |                               |                                   |
| <b>Comment</b>   |           | <b>Sheet No.<br/>*</b> | <b>Review Comment</b>  | <b>Initial<br/>Code<br/>**</b> | <b>Response</b>  | <b>Response<br/>By</b>                 | <b>Final<br/>Code<br/>***</b> | <b>Correction<br/>Verified by</b> |
| <b>No.</b>   | <b>By</b> |                        |  |                                |  |  |                               |                                   |
| 5  | ADB       | Gen                    | RFP Section 2.14.4.17 includes the following, "WSDOT stormwater facilities shall include information plates to aid in identification of 1 maintenance needs at facilities that will be constructed or modified as part of this Project in 2 accordance with Chapter 5 of the HRM" Please include a discussion about where the plates were installed and what information was put in the plates including any list of abbreviations needed to aid in reading the information on the plates. | A                              | RFI 0393 has been issued to incorporate information plates in accordance with HRM Section 5-5.3 and Std. Plans M-24.65-00 and M-24.66-00. Section 3.6 has been added to discuss the stormwater BMP information places. | TPH                                    | A                             | JDZ                               |
| 6  | ADB       | Section 3.2            | Please add a detailed discussion about the special pipe materials used for the Talbot Bridge crossing complete with the material specification, connection details, provisions for expansion and contraction, support requirements, and paint(?) to assist WSDOT maintenance in understanding what they need to replace if those get damaged.  | A                              | A discussion about the special pipe materials are now included in the maintenance manual. Appendix H has been created to include the manufacturer's technical information and structural details for the pipe hangers. | TPH                                    | A                             | JDZ                               |
| 7  | ADB       | Gen                    | Based on past trouble shooting with WSDOT Maintenance staff, it would be super helpful to include the CABS catchment area figures from the Hydraulic Report as part of the appendices here.  | A                              | The Post Project WQ Area figures have been included. These figures show the catchment areas for all WQ treatment BMPs.   | TPH                                    | A                             | JDZ                               |